

MARKED UP VERSION OF AMENDED CLAIMS

1. (Amended) A method for removing condensables from a gas stream, the method comprising the steps of:

- (D) inducing the natural gas stream to flow at supersonic velocity through a conduit of a supersonic inertia separator [(1,23,306,358)] and thereby causing the fluid to cool to a temperature that is below a temperature/pressure at which the condensables will begin to condense, forming separate droplets and/or particles;
- (E) separating the droplets and/or particles from the gas; and
- (F) collecting the gas from which the condensables have been removed, characterized in that the supersonic inertia separator [(1,23,306,358)] is located in the vicinity of the wellhead [(305,352)] of a natural gas production well [(301,350)] for the separation of condensables from the natural gas stream produced through said well [(301,350)].

2. (Amended) The method of claim 1, wherein step B) a swirling motion [(22)] is induced to the supersonic stream of fluid thereby causing the condensables to flow to a radially outer section of a collecting zone in the stream, followed by the subsonic or supersonic extraction of the condensables into an outlet stream from the radially outer section of the collecting zone.

3. (Amended) The method of claim 2 wherein the swirling motion is imparted by a wing [(15,41)] placed in the supersonic flow region.

4. (Amended) The method of [claims 2 or 3] claim 2, further comprising the step of: creating a shock wave in the stream that is upstream of the collecting zone and downstream of the location [(15,41)] where the swirling motion [(22)] is imparted.

5. (Amended) The method of claim 4 wherein the shock wave is created by inducing the stream of fluid to flow through a diffuser [(11,35)].

6. (Amended) The method of [any one of claims 1 to 5] claim 1, further comprising adding a hydrate inhibition component to the outlet stream extracted from the radially outer section of the collecting zone.

7. (Amended) A device [(1,23,306,358)] for removing condensables from natural gas according to the method of [any one of claims 1 to 6] claim 1, the device comprising:

an acceleration section wherein gas is accelerated to a supersonic velocity;

a swirl imparting section [(15,41)] that imparts a swirling motion to the gas;

a collection zone from which a gas stream containing reduced content of condensables is removed; and

a radially outer section of the collecting zone with a radially outer section from which the condensables can be collected, characterized in that the device [(1,23,306,358)] is located in the vicinity of the wellhead [(305,352)] of a natural gas production well [(301,350)] and is designed for the separation of condensables from a natural gas stream produced through said well [(301,350)].

8. (Amended) The device of claim 7 further comprising a shock wave initiator [(11,35)] downstream of the swirl imparting section.

9. (Amended) The device of claim 8 wherein the shock wave initiator is a diffuser [(11,35)], located so that the shock wave is upstream the collecting zone.

10. (Amended) The device of [any one of claims 7 to 9] claim 7, wherein the acceleration section comprises a Laval-type inlet [(3,25)] of the conduit, and wherein the smallest cross-sectional flow area of the diffuser [(11,35)] is larger than the smallest cross-sectional flow area of the Laval-type inlet [(3-25)], and wherein the swirl imparting section that imparts a swirling motion to the stream comprises a wing device [(15,41)].

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11. (Amended) A wellhead assembly comprising a device as claimed in [any of claims 7 to 9] claim 7, downstream of the wellhead choke [(305,352)].

12. (Amended) A wellhead assembly as claimed in claim 11, comprising a sub-sea wellhead (305)].

13. (Amended) The device of claim 7, wherein the radially outer section of the collecting zone debouches into an annular first outlet [(21,27)] for collecting a condensables enriched fluid stream and a central section of the collecting zone debouches into a tubular second outlet [(7,43)] for collecting a condensables depleted fluid stream, characterized in that the tubular second outlet [(7,43)] is formed by a substantially straight tubular which remains substantially co-axial to the annular first outlet [(21,27)] along at least a substantial of its length.

14. (Amended) The device of claim 13, wherein the annular first outlet [(21,27)] has in downstream direction a cylindrical or diverging shape.

15. (Amended) The device of claim 14, wherein the tubular second outlet [(7,43,413)] has in downstream direction a cylindrical or diverging shape and provides a co-axial vortex finder duct [(413)] within the annular first outlet [(21,27)].